



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,560	12/27/2006	Dino Lombino	34485/04774	8887
99658	7590	12/28/2011		
Calfee, Halter & Griswold LLP 800 Superior Ave E Suite 1400 Cleveland, OH 44114			EXAMINER GRAY, JILL M	
			ART UNIT 1798	PAPER NUMBER
			NOTIFICATION DATE 12/28/2011	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocket@calfee.com
OCVIPDEPT@owenscorning.com

Office Action Summary**Application No.**

10/583,560

Applicant(s)

LOMBINO ET AL.

Examiner

JILL GRAY

Art Unit

1798

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-23 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1-23 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :06/27/2011;06/27/2011,07/27/2011,10/17/2011.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on June 27, 2011 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is indefinite because it is not clear if the coupling agent comprises both components (the unsaturated silane and an aminosilane) as in a mixture of silane or if the silane coupling agent of claim 10 is selected from the groups consisting of an unsaturated silane and an aminosilane.

More specifically, claim 12 is indefinite because it further defines the aminosilane of claim 11, but indicates that the aminosilane can be selected from non-amino

containing silanes. Hence, the metes and bounds for which patent protection is being sought are not clear.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6, 8-13, and 18-23 are rejected under 35 U.S.C. 102(b) as being anticipated by PCT Patent Publication WO 95/09133 (Klett).

As to claims 1, 18 and 21, Klett discloses a glass strand coated with an aqueous sizing composition comprising about 30 to about 60 wt% of polyester, (page 6, lines 1-11), about 5 to about 20 wt% of a thermoplastic polymer that can be polyvinyl acetate (page 6, lines 14-20 and page 7, lines 10-14), and about 20 to about 50 wt% of a urethane-modified epoxy (page 5, lines 1-3). The broad terminology of "polyurethane" and the claim language of "comprising" anticipates the urethane-modified epoxy. As to claim 21, Klett discloses the formation of composites comprising a thermosetting polymer material. See page 10, lines 22-33. Also, claim 18 does not require the presence of the coupling agent.

As to claim 6, Klett discloses that the urethane can be formed from the reaction of a polyisocyanate and a polyhydroxy functional polyether (polyol). See page 4, lines 19-25.

As to claims 8-9, Klett discloses that the composition can contain a lubricant such as compounds of esters of fatty acids. See page 8, lines 8-28.

As to claim 10-11, Klett discloses that silane coupling agents can be present and can be aminosilanes. See page 7, lines 15-30.

As to claim 12, Klett discloses that silanes having acrylic or methacrylic functional groups can be used. See page 7, lines 15-30. Claim 12 is anticipated because it contains alternate embodiments one of which has been met by the prior art.

As to claim 13, Klett discloses in Table 2, Example 1 having a loss on ignition of 1.95. See page 13.

As to claim 19, Klett discloses that the coupling agent may comprise about 1 to about 8 wt % of the sizing composition. See page 7, lines 35-37 and page 8, lines 1-8.

As to claim 20, Klett discloses that the sizing composition can have a solids content of about 6 to about 20 wt%. See page 9, lines 17-21 and 32-33.

As to claim 22, Klett discloses that the thermosetting material can be epoxy. See page 10, lines 23-33.

As to claim 23, Klett discloses a composite formed having a glass content of 30 wt%. See page 13, lines 1-6.

Therefore, the teachings of Klett anticipate the invention as claimed in present claims 1, 6, 8-13 and 18-23.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 2-5, 7 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Patent Publication WO 95/09133 (Klett) as applied above to claims 1, 6, 8-13 and 18-23 in view of Gonthier et al., 2004/0265586 A1 (Gonthier) as applied in previous Office Actions.

Klett is as set forth above but does not teach how the polyester is produced or the molecular weights of the polyvinyl acetate and polyurethane.

Gonthier is as set forth in previous Office Actions and teaches glass strands coated with an essentially aqueous sizing composition which comprises a polyurethane and a polyester. See entire document and for example, abstract. In addition, Gonthier teaches that his polyester is produced by the reaction of a carboxylic acid and/or anhydride and a polyol, as required by present claim 3. The polyol can be a polyalkylene glycol and the anhydride can be maleic anhydride, as required by present claim 4. See [0028]. Gonthier is silent as to the specific molecular weight of his polyester.

As to claims 3-4, it would have been obvious to one having ordinary skill in the art to use as the polyester of Klett a polyester that is produced by the reaction product of a carboxylic acid or anhydride with a polyol, essentially as claimed and as taught by Gonthier. The motivation for doing so, at the time the invention was made, is that it has been held that the combination of two known compositions each of which is taught by the prior art to be used for the same purpose to form a third composition that is to be used for the very same purpose may be *prima facie* obvious. MPEP 2144.06.

As to claims 2, 5, and 7, these claims are drawn to the molecular weight range of the polyester, the polyvinyl acetate and the polyurethane. It is the position of the examiner that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. *In re Aller*, 105 USPQ 233 (CCPA 1955). Moreover, it would have been obvious to the skilled artisan during routine experimentation to determine the specific range of polymers best suited and commensurate with the desired properties of the end product. In the present case, it is not evident that the molecular weight range results in unexpected properties of the resultant glass strand.

As to claims 14 and 15, Gonthier teaches filament diameters of from 9 to 16 μm . See [0039]. Also Gonthier teaches the strands having a tex between 15 and 60 tex. See [0040]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use as the glass filaments of Klett filaments having a diameter and tex as taught by Gonthier, motivated by a reasonable expectation of success of forming sized glass strands suitable for producing composite materials. Moreover, the teachings of Gonthier clearly suggest that glass strands of the type contemplated by applicants have utility in the formation of sized glass strands. Hence, the requirements of claims 14-15 are not construed to be a matter of invention in the absence of clear factual evidence of unexpected properties directly related to the specific type of glass strand.

Therefore, the combined teachings of Klett and Gonthier would have rendered obvious the invention as claimed in present claims 2-5, 7, and 14-15.

8. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Patent Publication WO 95/09133 (Klett) as applied above to claims 1, 6, 8-13 and 18-23 in view of Temple et al., 5,670,255 (Temple) as applied in previous Office Actions.

Klett is as applied above and incorporated herein, but does not disclose the inclusion of an ammonium salt antistatic agent.

Temple teaches the inclusion of antistatic agents in his sizing composition, further teaching that the antistatic agent can be an ammonium salt. See column 15, lines 25-31 and column 20, lines 35-40.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the composition of Klett by including an antistatic agent as taught by Temple with the expectation of enhancing the processability of glass strands after coating. The inclusion of this component is not construed to be a matter of invention absent clear evidence to the contrary. As to the specific antistatic agent, the requirement for cetyltrimethylammonium chloride is no more than the preferential selection of one antistatic agent from among many being selected for its art recognized purpose. Accordingly, absent clear factual evidence to the contrary, the inclusion of this component is not construed to be inventive.

Therefore, the combined teachings of Klett and Temple would have rendered obvious the invention as claimed in present claims 16-17.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JILL GRAY whose telephone number is (571)272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on 571-272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/
Primary Examiner
Art Unit 1798

jmg